Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	**MAC PDU Concatenation in RS**	
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Re:	IEEE 802.16j-06/034: “Call for Technical Proposals regarding IEEE Project P802.16j”	
Abstract	In MR networks, By classifying and combining the MAC PDUs in RS, the PHY and MAC overhead can be decreased.	
Purpose	Discuss and adopt proposed text and message format.	
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MAC PDU Concatenation in RS

[This contribution propose a harmonization text proposal on MAC PDU Concatenation.]

1. Problem Statement

The MAC PDU concatenation method in 16e (6.3.3.2) can still be used for MR systems. However, some clarifications are needed for MR network.

In MR networks, downlink MAC PDUs for transmission to an RS, including MAC PDUs for transmission to an SS via an RS, and downlink MAC PDUs for transmission to an SS shall not be concatenated into the same burst.

3. Specific Text Change

[***Insert a new paragraph after the first paragraph of the subclause 6.3.3.2 as indicated:***]

6.3.2.2 Concatenation

Multiple MAC PDUs may be concatenated into a single transmission in either the uplink or downlink directions. Figure 25 illustrates this concept for an uplink burst transmission. Since each MAC PDU is identified by a unique CID, the receiving MAC entity is able to present the MAC SDU (after reassembling the MAC SDU from one or more received MAC PDUs) to the correct instance of the MAC SAP. MAC Management message, user data, and bandwidth request MAC PDUs may be concatenated into the same transmission.

In MR networks, downlink MAC PDUs on relay links and downlink MAC PDUs on access links shall not be concatenated into the same burst. RS may concatenate uplink MAC PDUs into a single transmission burst on the relay link.

[***Insert the following text into subclause 3:***]

access link: An 802.16 radio link that originates or terminates at an MS. The access link is either an uplink or downlink as defined in IEEE Std. 802.16-2004 and IEEE Std. 802.16e-2005.

relay link (R-Link): An IEEE Std. 802.16j radio link between an MR-BS and a RS or between a pair of RSs. This can be a relay uplink or downlink.

References

[1] IEEE C802.16j-06/178, “Enhanced Concatenation and MPDU Construction”

[2] IEEE C802.16j-06/237, “A Proposal for Construction and Transmission of MAC PDU in 802.16j”